REPORT

ON THE

HIGH RANGES

OF THE

ANAMULLAY MOUNTAINS,

BY

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Report on the High Ranges of the Annamullay Mountains, to accompany the Series of Sketches by Lieutenant Colonel Douglas Hamilton.

1. The Annamullay mountains are situated on the southern boundary of the Coimbatore District, in the Madras Presidency, and are divided into the Higher and the Lower Ranges ; the latter lying to the westward comprise the Annamullay Teak Forests ; their average elevation is not more than 2,000 feet above the level of the sea, with peaks and ridges rising to 4 and 5,000 feet. The whole of the lower range, with the exception of a few bare and rocky peaks, is covered with dense forest containing much valuable timber ; whereas the higher range lying to the eastward consists of extensive open grassy hills and vallies with shola forests similar to those on the Neilgherries and Pulnis, varying in elevation from 6,000 to 8,000 feet and upwards, above the sea level. The range is only separated from the Pulnis, which lie to the eastward, by the valley of Ungeenaad; this valley is not more than 12 or 15 miles across in a straight line ; its western end is shut in by two blocks of well wooded mountains with plateaux on their summits forming a connecting link between the Annamullays and the Pulnis. Viewed from the line of Railway near Coimbatore, the Annamullays and Pulnis appear as one continuous range of mountains.

2. The high ranges were first visited in 1851 by Major Michael who was then in charge of the teak forests ; during the visit he discovered the beautiful valley now bearing his name, and depicted in Sketches Nos. 1, 2, and 3 ; he only remained two days on the range and had not time to explore the high lands beyond. In September 1858 an expedition was formed by Drs. Cleghorn and McPherson to thoroughly explore the higher ranges, I accompanied the party, and it was on that occasion I took the first series of sketches of the Annamullays, already in the possession of Government. The weather, during this expedition, proved most unpropitious ; heavy rains accompanied by strong wind and dense mists drove us down after a sojourn of only two days on the upper regions. On the second day we succeeded in reaching Michael's valley ; but mist and rain hid the greater portion of it from view ; even with fine weather it would have been difficult for so large a party, consisting of eleven gentlemen, to remain sufficiently long to explore the range. With the stormy weather

we encountered, it was altogether out of the question : all our baggage and supplies having to be carried up by coolies from the low country who suffered so severely from the cold and wet. We fortunately had fine clear weather during the two days occupied in the ascent, as well as on the day we descended, affording us grand views of some magnificent mountain scenery. Dr. Cleghorn, shortly after our return, forwarded to Government a full report of the expedition, which was published, together with some of my sketches, by the Royal Society of Edinburgh in 1861.

In November, the same year 1858, Captain Beddome, who had accompanied the former party, managed to ascend the high ranges in one day by the same route, viz., by Poonachee and the valley of the Toracoodoo (or, according to Major Michael, *Toracadavoo*). He obtained a fine view of the high range from the summit of the Ukka ; but his time being limited he was unable to explore the country beyond Michael's valley. In April 1860, the same officer accompanied by Mr. E. C. G. Thomas, Assistant Collector of Malabar, again visited the high ranges and explored part of the country lying to the south-west of Michael's valley. They encamped on the Coomarikul Mullay plateau, depicted in Sketch No. 8, and appear to have proceeded to the west as far as the Kartu Mullay. Captain Beddome's account of these two trips, as well as the expedition in 1858, will be found in Dr. Cleghorn's Forests and Gardens of Southern India, published in 1861. Early in 1863, Major Michael, Mr. Hannyngton, and the late Captain Hill visited the higher ranges, and remained for some time in Michael's valley, and its neighbourhood. They ascended the hills by a new route, viz. viâ Dhullee Poondy, and across the Appia Mullay ridge. Major Michael, on his return, furnished a report of this excursion to Government. The above, I believe, are all the visits that have been made to the high ranges prior to the one I am now reporting on.*

3. On the 24th March 1865, I left Dhullee to ascend the high ranges by Major Michael's route, for the purpose of making the series of sketches accompanying this report. Major Michael describes the ascent so accurately, that I cannot do better than embody the following extracts from his report :—

"We went from 'Polachy' (distant from Coimbatore 26 miles) "to 'Ooodoomullacottah' (18 miles), and thence to 'Dhullee' (8 miles),

* Since writing the above, I have been informed that Captain Beddome again visited these Hills with Mr. Walhouse of the Civil Service ; but I have not ascertained in what year, or for what period they remained there.

" from which village a sandy road running six or seven miles in a south-
" westerly direction leads to the foot of the mountain pass by which the
" Pooliar village of ' Poondy' is reached, here there is a small pagoda,
" formerly no doubt deeply buried in the jungle, but now opened out
" by cultivation. The ascent commences at this spot, the ghat is
" exceedingly steep and rocky, quite impracticable for horses ; the hills
" rising abruptly from the plain to a height of 1,500 feet, at which
" elevation a plateau is reached of considerable extent, well watered by
" perennial streams, and covered with thin and rather stunted jungle
" interspersed with bamboo, and frequent open grassy glades. It is very
" beautiful in appearance, but bears a notoriously bad name as a most
" feverish locality for low country visitors, although it is on this plateau
" that the Pooliars generally reside at their villages of Poondy Maradop-
" Cooramullay Vendyum, &c. The Pooliars are a jungle race, resembling
" Mulcers and Eroolars in their habits and mode of life, but differing
" somewhat in their language (a Tamil patois) and in personal appearance,
" the most remarkable feature of which is the pride taken by the men in
" the length of their hair. It is never cut but twisted and matted into
" six or eight long rope-like coils which are gathered into a large knot at
" the back of the head ; in one instance the hair of a tall man, 5 feet
" 10 or 11 inches in height, trailed about a foot on the ground when
" loosened.

From the foot of the ghat to Poondy is a fatiguing walk of two
" hours and twenty minutes, and from thence a more gradual ascent
" of three quarters of an hour leads to a high open ridge at the
" base of a mountain called Appia Mullay. From the south side of this
" ridge a fine view of the Toracadavoo ravine is obtained, the magnificent
" bluff of the Tangachy Mullay overhanging the thickly wooded gorge,
" and the higher ranges towering above, form a most beautiful piece of
" scenery. This ridge makes an excellent encamping ground for the
" night, as water is obtainable, the country is open, ventilation free,
" and the elevation, ascertained by the Aneroid, to be as nearly as possible
" 3,900 feet above the sea level.

The next day's march leads along the northern slope of the
" Toracadavoo ravine, the numerous spurs which have to be crossed
" rendering the path very undulating, and in some places even
" precipitous and difficult for loaded coolies. It was observed that since
" 1851 a great deal of Coomri cultivation has been carried on by
" the Pooliars and Moodoowars on these slopes. Indeed, the greater

" part of the ravine on both sides shows signs of having been thus cul-
" tivated and abandoned to the growth of scrub jungle. After a walk of
" about an hour and a half, the track joins that which leads to Ponachee
" near a very remarkable rock, shaped like a hay stack, and nearly the
" whole of the rest of the day's journey is steep ascent winding round
" the base of the Tangachy Mullay, through thick shola jungle, in the
" midst of which the Toracadavoo river is crossed, and after a further
" climb the shola suddenly ends, and the path emerges on to the open
" side of the hill, which is covered with short sweet grass, studded here
" and there with the 'Rhododendron arboreum' 'Osbeckia' 'Sonerilla'
" 'Grandi flora,' and other flowering bushes and shrubs identical with
" those found on the Neilgherries. The ascent continues for several
" hundred feet up the slope, the track leading to a small swamp called
" Seringany Colum, the vicinity of which makes a good halting place.
" The elevation is 5,900 feet, and the distance can be accomplished by
" a good unburdened walker in 3½ hours, the direction taken up to this
" point is south-east, but here the course turns more directly south, and
" two hours' walk over difficult ground brings the traveller to the northern
" extremity* of a beautiful plateau, first visited by myself in 1851, and
" subsequently by Dr. Cleghorn, Captain Beddome, Colonel Hamilton,
" and others, and now known by the name of Michael's valley. This
" day's march leads through a vast extent of magnificent shola forest
" which stretches from the river below far up the slopes of the hills, and
" is admirably adapted for the cultivation of coffee and chinchona."

The distance from the foot of the hills, via Appia Mullay to Michael's valley, is about 20 miles, viz., 9 miles to Appia Mullay and 11 miles further on to the valley. The huts in Michael's valley, erected by Mr. Hannington in the previous year, were still standing, and with the assistance of the Pooniars, who like the Karders and other hill tribes are expert at hut building, soon made them habitable. This picturesque spot (vide Sketch No. 9) was my head quarters during my stay on the Hills.†

4. The high ranges are divided into blocks of mountains, separated by deep wooded and generally very precipitous vallies; these detached blocks, or plateaux are very marked, as perceptible in Sketches Nos. 7, 8, 12 and 13.

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* This appears to be a mistake, it should be "eastern extremity," the valley lying nearly due east and west.

† I here put down the seeds of several kinds of Australian trees; but only a few germinated.

It is difficult to judge the superficial area of a mountain range with accuracy by the eye, but having walked over nearly, indeed, I may say, the whole of the Annamullay Plateau, I think I am not far wrong in estimating it to be between 80 and 100 square miles, but this includes a large tract situated in the Travancore territory. The broken nature of these mountains causes the scenery to be far more varied and beautiful than generally met with either on the Pulnis or Neilgherries; but, as may be expected from their propinquity, there is much similarity in many respects in all three ranges. The general trend of the Highlands is N. N. E. and S. S. W., the highest elevations being to the north-east and to the south, gradually decreasing in sloping undulating hills towards the west, excepting the Arnee Moody mountain and its plateau (vide Sketch No. 13,) which is situated at the extreme S. S. West end of the range.

5. To the north of Michael's valley, some 2,000 feet above it, is the Tunukka plateau, running nearly due east and west, it is very narrow at the highest or eastern end, not being more than from half to three-quarters of a mile across, but increasing to the westward to about two miles in breadth and gradually sloping away to the vast forest lands of Cochin and Travancore, its length, including the slopes towards the forests, may be 5 or 6 miles. Immediately below the highest portion of it, and to the west, lies Michael's valley, (vide Sketches Nos. 1, 2, and 3) the position of the valley is also as near as possible due east and west, it is quite shut in by mountains, well watered, beautifully wooded, and with the southern swamp easily convertible into a lake it forms a most lovely site for a settlement, being about the same elevation as Coonoor with a climate* very similar. The valley is between three and four miles long, and about two miles at its greatest breadth; in it are numerous sites favorable for building, with an unlimitable supply of wood from the immense forests in its neighbourhood.

6. Nearly east of Michael's valley, divided from it by deep wooded ravines of considerable extent, is situated the eastern plateau, (vide Sketch No. 7). It is from four to five miles long, and two to three miles broad; but the interior of the plateau is more broken into abrupt ridges than any of the other blocks of table-land; though well watered and wooded, it is not so well adapted for a settlement as Michael's valley, it contains many extensive shola forests, as shown in Sketch No. 7. Its elevation is about the same as that of Michael's valley, with ridges and hills rising from 6 to 800 feet higher.

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* The readings of the Thermometer during my residence in the valley are appended.

Round the ridge of hills forming the southern side of Michael's valley, and situated nearly south-east of it, at a distance, in a straight line of about five, and by the path seven miles, is the small but beautiful plateau of the Coomarikul Mullay (vide Sketch No. 8,) it is well watered and considerably higher than Michael's valley, and being situated close to the track leading down to Ungeenaad would form a convenient site for a settlement, should an approach to the hills ever be opened up in that direction; but Michael's valley could be reached from thence by a very easy road of not more than eight miles, and is, in my opinion, far better adapted for a settlement. To the eastward of this spot, and divided from it by the valley down which the Ungeenaad pass winds, there is a block of mountain called the Puddicul Mullay, (vide Sketch No. 8), this is over 7,000 feet above the sea, but is not of any great space. There is a considerable extent of high undulating table-land to the west and north-west of the Coomarikul Mullay, part of which is seen lying away to the left below the Kartu Mullay in Sketch No. 12; there are also two fine vallies in the same direction, that nearest to the Kartu Mullay could be easily converted into a very beautiful lake, as the hills approach close to each other at the lower end of the valley. Proceeding over the Coomarikul Mullay, for about five or six miles along the ridges overhanging the Ungeenaad valley, the Kartu Mullay is reached; from which a fine view of the two plateaux lying between it and the Arney Moody mountain is obtained (vide Sketch No. 13); both these plateaux are within the Travancore boundary. There is no table-land beyond the Arney Moody to the westward.

7. Having thus given an outline description of all the principal blocks and plateaux on the range, I will now proceed to relate events attending an excursion I made to the great Arney Moody mountain viâ "Coomarikul," the "Kartu Mullay," and across the two last mentioned blocks of table-land, this portion of the hills having never before been visited, that I am aware of. I first attempted to reach the mountain near the end of April, but owing to excessive inclemency of weather was obliged to return to Michael's valley. On the 4th May, I again started for the mountain, accompanied by Mr. Faulkner of the 17th Lancers. Our first march was to Coomarikul Mullay, by a path used by the Pooliars and Moodoowars, of very easy gradients, which, as Major Michael remarks in his report, "might be cantered over on horse-back in its "present state," the distance by this path is about seven miles; between

Coomarikul and Michael's valley we passed two remarkable precipices situated on each side of a wooded valley leading to the westward (vide Sketch No. 10), they had the appearance of two huge portals guarding the entrance of the valley, and being far in mountain were very striking objects. The precipices on the right, or northern side, extend for a considerable distance beyond that shown in the sketch. I am informed by a gentleman attached to the Geological Survey, who has seen the sketch, that these precipices must have at some remote period been sea-worn cliffs, as they could be formed in no other way. Clouds obscured the distant view, or part of the Kartu Mullay plateau would have been visible beyond the valley which trends away to the north-west. Our next encampment was at the foot of the Kartu Mullay, to reach which we had to ascend the summit of the Coomarikul Mullay, and proceed to the westward along the precipitous ridges overhanging the Ungeenaad valley. The views from this mountain are the grandest and most extensive* I have ever beheld; some of the precipices are of stupendous magnitude, and the charming variety of scenery, comprising undulating grassy hills, wooded vallies, rocky crags, overhanging precipices, the green fields, in the valley of Ungeenaad, the grand mass of the Pulnis beyond, and the blue ranges in the far distance, present a view far beyond my power to describe, and which must be seen to be appreciated; in a word, the scenery in the Annamullays is surpassingly grand, and incomparably beautiful; on our way to the Kartu Mullay we disturbed several herds of ibex, which, as they bounded amongst the crags and precipices, added greatly to the effect of the grand and wild features of the country we were passing through. I noticed two or three aqueducts similar to those met with on the Pulnis, probably made by the inhabitants of the Ungeenaad valley for the purpose of conveying water to their fields; others were observed on the Puddicul Mullay. This day's march over the mountain was about six miles. The Pooliars, who were sent on ahead, had constructed two comfortable huts for us; they are most expert at this work, erecting a neat and perfectly water-tight hut in a very short time; the walls and roof are made of the hill bamboo, supported by stems of small trees, and interlaced with grass and leaves; the uprights and rafters being neatly tied together with strips of bark.

On the 7th May, we started for the great Arney Moody mountain, leaving our camp at 10 minutes to 6 A. M. ascending over a spur of the

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* In the description of Sketch No. 8, the extent of the view obtained is stated.

Kartu Mullay (at the foot of which we were encamped), we then descended on to a fine undulating plateau, seen in Sketch No. 13, and after a walk of about four miles reached a beautifully wooded narrow valley, through which a stream studded with Rhododendrons was running in a south-easterly direction. This valley rises in its centre, and another stream flows exactly in the opposite direction, viz., to the north-west; the valley is at least 1,200 feet below the plateau, the descent being exceedingly steep and rugged. After crossing the stream, we struck into a well worn elephant path, ascending the opposite slope by a series of short zigzags, these were so perfect and regular that we could scarcely believe it possible they were made by those animals. After ascending the zigzags we diverged from the path leaving it on our left, and reached, by a steep ascent, a magnificent plateau considerably higher than the one we had just crossed over, and apparently about 7 miles long by 4½ miles broad, being by far the most extensive table-land on the range; it is studded with sholas, and watered by two streams of considerable size, the largest winding in a northerly direction through undulating hills bordered by a broad swamp capable of being converted into an extensive lake. This stream eventually descends into the deep valley previously mentioned, forming a picturesque water-fall, seen to the right in Sketch No. 13. The other stream rises in an extensive morass to the eastward, and takes an easterly course falling into the western end of the Ungeenaad valley; besides these two large streams numerous smaller ones run into them. I conceive this plateau to be nearly if not quite as high as that of Ootacamund. The Arney Moody itself is separated from it by a deep precipitous wooded ravine. It could only be reached by making a detour to the left or east, descending into a rather deep valley, and then ascending the left hand spur, seen in Sketch No. 13. The ascent occupied us one hour and ten minutes fast walking. Its summit is full 1,500 feet above the plateau, and consists of a narrow ridge about 3 or 400 yards in length running north-east and south-west. A range of hills extends for some distance to the west, with open grassy summits, but no table land; beyond this mountain immense forests are seen to the westward as far as the eye can reach, resembling in some measure the prospects from the hills to the west of Neddivuttum on the Neilgherries, but the forests appear far more extensive. Unfortunately the clouds soon shut out the view, preventing my completing a sketch of the plateau from the summit. This grand mountain, standing out alone as it does amongst

smaller hills no doubt appears higher than it really is ; but viewing it from several points, more especially on a clear day, from the Neilgherries, comfirms me in the opinion that it is the most lofty on the Annamullay Range, and it may perhaps prove to be a rival even to Dodabetta, as yet considered the highest mountain south of the Himalayas ; the strong resemblance it bears to the Peermarl Mullay on the Pulnis is very remarkable. The descent occupied us 50 minutes. On our return, we followed an elephant path for several miles, the gradient of this path was truly wonderful, these sagacious animals avoiding every steep or difficult ascent with the skill of Engineers ! We were 4 hours and 25 minutes going, and 4 hours and 20 minutes returning, exclusive of stoppages. We walked as fast as we could and the nature of the ground would allow, in order to reach the summit of the mountain while clear of clouds, and to avoid being benighted on our return. I think, therefore, the distance between the camp at Kartu Mullay and the great mountain cannot be less than 14 or 15 miles. On our return from Kartu Mullay to Michael's valley, we found a more direct route leaving Coomarikul Mullay to the east. We again struck on an elephant's path, which, like those previously fell in with, avoided every steep ascent, except at one hill which was cleverly zigzagged, owing to masses of sheet rock preventing a regular incline being taken.

8. The Pooliars declared they had never been on the mountain before, and did not know its name ; but they told a gentleman who visited the range subsequently, that it was called the Anney Moody (elephant's forehead), and as such I find it is entered in the original unreduced map of the Great Trigonometrical Survey. It has been omitted in the reduced edition Sheet No. 62. The positions of the principal mountains in the Annamullay Range have been laid down with tolerable accuracy in this Survey, but the details are not so. What appears to be marked as Michael's valley in the map is placed N. E. and S. W. ; whereas it lies nearly due east and west by the compass. Moreover, the ridgy shadings of the mountains give no idea of the extensive plateau comprised in the range.

9. The finest apparent site for a settlement is the great plateau of the Anney Moody ; but one important question to be solved is the amount of rain-fall during the monsoons ; this has not yet been ascertained, though from the appearance of the sholas, the moss and lichens on the trees, &c., I am of opinion it is not much greater than that on the Pulnis and considerably less than the fall to the westward of Ootacamund. The area of this range is of such limited extent that there can hardly be any

great difference in the amount of rain at one spot or another, and there is reason to suppose the whole hills would be quite habitable throughout the year. It is to be regretted that I failed to reach this part of the hills on my first attempt, for had I then succeeded, I could have remained some days in the vicinity and thoroughly explored the country, but the second excursion was so late in the season that I was obliged to hasten back to my head quarters and prepare to leave the hills before the heavy rains set in ; had the Tooracadavoo river become flooded and impassable, there was no possibility of obtaining supplies from the low country.

10. With the superior advantages of the Neilgherries and Pulnis, it will probably be many years before any extensive settlement is formed on the Annamullays, unless the country is opened up by roads, then the thousands of acres of land suitable for chinchona, tea, and coffee, would soon attract planters to these lovely hills.

11. The only approaches to the hills that I am aware of, are—1st, from Kotoor on the north, up the valley of the Tooracadavoo to Michael's valley ; 2nd, from Dhullee or the north-east over the Appia Mullay ridge ; and 3rd to ascend the hills from the south-eastern side, viâ the valley of Ungeenaad on to the Coomarikul plateau or the plateau, beyond Kartu Mullay, I believe a road could be made for wheeled carriages up either the Tooracadavoo or the Ungeenaad valleys without any very considerable difficulties ; but I question if it would be advisable to construct anything more than a bridle-path over the Appia Mullay. The advantage of this latter route is the being able to secure a safe halting place half-way up on the Appia Mullay ridge ; whereas both the other roads pass through more than 20 miles of dangerously feverish country before safe halting ground can be reached.

12. No doubt the great drawback to opening up this range is the difficulty of access, the shortest known route from the foot of the hills to the table-land being over 20 miles in length ; another difficulty is the deep and precipitous nature of the valleys and ravines separating and intersecting many of the plateaus ; but though it may be long before a settlement is formed on the high ranges, the fine soil and suitable sites for the planter on the lower spurs of the range, together with the proximity of the railway, must attract notice ; and it is merely a question of time. Already about 1,800 acres of land have been taken up to the west of Poonachy near the lower or northern end of the valley of the Tooracadavoo.

13. The Highlands are entirely uninhabited ; but there are two tribes inhabiting the lower spurs of the range called Pooliars and Moodoowars. I only met with the former ; both tribes cultivate to a small extent, felling however large tracks of valuable forest to raise their wretched crops of ragee and bullar (dholl). I particularly noticed the great extent of forest cleared for Coomri cultivation since 1858.

14. The Pooliars are a wild looking race, somewhat resembling the Kardars and Mulcers who inhabit the slopes more to the north and westward ; but the most marked peculiarity about them, as already stated in the extract from Major Michael's report, is their hair, which they allow to grow to an enormous length, tying it up in a huge knot at the back of their heads ; others again, appear to take no pride whatever in their hair, allowing it to stand out in disheveled locks, giving them a most wild and uncouth look, like the drawings I have seen of the savages of Australia. Some of the young men wear their hair in large bunches at the sides, bound round the forehead with a small brass chain, these appeared to be the *dandies* of the tribe (vide Vignette at the end of the Sketches) ; in many instances the hair when let down came considerably below the hips, but I did not see the man with his hair trailing on the ground, described by Major Michael, he was away at a distant village. The dress of both the men and women is similar to that of the inhabitants of the plains, when they can afford it ; though in general the dress of the former consisted of nothing more than a ragged waist cloth. I observed one or two men wearing turbands, and was told that they were well to do, and could afford them.

15. The following is the Pooliars' statement of their different villages and number of inhabitants ; but it cannot be greatly relied on ; for I found these people most unscrupulous liars ; at times telling deliberate lies apparently without any object whatever.

Name of Village.		Able bodied men.	Old men.	Women and Children.		Total.
Poondy...	...	15	12	30	=	57
Mavadop...	...	9	0	13	=	22
Cooramullay	...	14	8	28	=	50
Wundiut...	...	7	3	14	=	24
Cholee Dhullee	...	6	5	15	=	26
		51	28	100	=	179

I have since heard that, cholera previously unknown amongst them, swept

over their villages this year, and carried off great numbers of the inhabitants.

16. The Pooliars have a few goats and fowls ; their villages consist of scattered bamboo huts thatched with grass ; those in the village of Poondy were well made, some of the houses having "pandals" in front of them, and looked more comfortable than many of the Native huts in the plains (vide Vignette at the end of Sketches) ; besides the villages named above, they have several temporary hamlets. On my way up to the high ranges I passed two of these that had been burnt down by the recent annual fires, they being deserted by the occupants during the hot season. The owner of one of the hamlets was with me carrying a load, and this was the first intimation he had of the catastrophe ; his store of ragee had been stowed away in chatties, and placed in one of the huts ; he did not appear to care about the destruction of the huts, as they could be easily re-built ; his great anxiety was to ascertain the damage done to his store of grain, and his consternation was great when he found the larger portion of it baked into a cindery cake. The Pooliars appear not to be at all particular as to what they eat ; flesh of all kinds of animals is greedily devoured, and *rats* are a very favorite dish amongst them ; they have a most ingenious rat-trap made of a bamboo stuck upright and bent with a string like a bow with a clever arrangement of nooze and catch near the ground, and placed in front of the rat hole. They also catch jungle fowl and other birds with this springe. From their propensity to falsehood it was difficult to obtain anything reliable regarding their customs. They informed me that no man is allowed more than one wife, and can only re-marry twice ; the marriage ceremony consists principally of feasting and drinking, the bride's father having to bear the principal expenses ; they declared that no cases of intoxication ever occurred during these ceremonies ; that a drunken man on such an occasion would be most severely beaten by the tribe ; the probability being that there is not a single sober individual in the whole company as long as the drink lasts ! They bury their dead, and on the third day the mourners break chatties of milk and water over the grave, after which they never revisit it. I could obtain very little information with regard to their religion ; they said they performed "pooja" to a god called Pooliar, bringing cocoanuts, honey, and flowers, and pouring milk on the idol ; giving some of the honey to the Priest *and keeping some themselves*!

17. The Pooliars are most useful in carrying loads over the moun-

tains; they object however to carry anything on their heads, but will take whatever they can strap with strips of bark on their backs a lá knapsack (vide Vignette). Some of the loads they carried for me were far heavier than any cooly on the plains would take up. On my return from the hills, owing to some mistake, there were no coolies ready to carry my baggage from the foot of the hills, and I was obliged to take the hill men on to Dhullee. My servants informed me that the men could not go a quarter of a mile along the road without resting, declaring that if they only had hills to go up and down they would not mind carrying the loads twice the distance, but that the level ground was most distressing to them.

18. I did not meet with the Moodoowars during my sojourn on the hills; they appeared to avoid me; for on the first occasion of my proceeding to Coomarikul Mullay, I found a freshly deserted encampment, which, from its appearance, they had only occupied for a short time, though by the preparations they had made it was evidently intended for a more permanent camp. According to the Pooliars' information, there are not more than fifty Moodoowars on the hills, probably only one clan visits the eastern portion of the high ranges frequented by the Pooliars. They appear to be a wandering race, cultivating small patches of ground; they possess herds of cattle and buffaloes, with which they till the soil; and when the grass is fresh and green after the annual fires they drive them on to the higher ranges to graze. They have no fixed habitations, or villages; but wander over the mountains with their cattle, erecting temporary huts, and seldom remaining more than a year at one place. They eat samber ibex, pig, &c., but will not touch the bison, which latter the Pooliars do not object to eat; they are a timid race, and avoid strangers; they make "pooja" to the Pooliar idols.

19. The high ranges abound in ibex; every rocky crag and mountain has its herd, but they are exceedingly wild; both the Pooniars and Moodoovars possess guns, and they have periodical hunts after the ibex, which accounts for their being so shy; their mode of operation is as follows:—before the hunt takes place they erect barriers of stout bushes at various spots along the passes frequented by the ibex. At every 10 or 12 feet along the barrier there is a weak spot composed of light twigs with a running nooze of rattan surrounding it, the other end of the rattan being firmly secured to a post fixed in the ground, having made these preparations, they proceed to drive the ibex towards the barriers, shooting any they can get a chance at on the way. The ibex on being driven up to the barrier rush at

the weak portions of it and are caught in the noozes, from which, owing to their curved horns, they cannot possibly extricate themselves, and are quickly despatched by their pursuers. The Pooliars endeavoured to persuade me that very few ibex were captured in this way, and that it was only the Moodoowars that hunted them ; but from the numerous barriers I saw, it is, I imagine, a very successful method of catching them. I was surprised to find so few samber on the range, though it was the season of the fresh green grass, hardly a deer was to be seen. The only way I can account for it is, that the open hills being divided into blocks separated by deep precipitous and almost inaccessible ravines, down which there are but few passes, the deer can be easily hemmed in, and doubtless the hill men have, in their periodical hunts, taken advantage of this and captured, or so disturbed the samber as to cause them to desert these high lands. Bison come up at times in considerable numbers ; but while I was on the hills, only a few were seen ; elephants cross over from one great forest to another ; but they generally travel during the night, and are therefore seldom seen. The other animals and birds found on this range are similar to those met with on the Neilgherries and Pulnis.

20. It is worthy of note, that neither on the Annamullays or Pulnis is the edible wild strawberry to be found, though so common on the Neilgherries. Captain Beddome mentions that the rose is also absent on the Annamullays. I omitted to notice this ; but I have met with it frequently on the Pulnis. The shola trees on both these ranges are of much larger growth than those on the Neilgherries ; but whether owing to superior soil or climate, or both combined, I am unable to say. In a shola on the eastern plateau I met with a very large tree, the stem measuring 21 feet in circumference five feet from the ground.

21. At the time of my visit, the Natives on the plains had the greatest dread of the Annamullays, declaring that any one going to the high ranges was certain to contract the very worst kind of jungle fever. The teak forests to the westward have always had a very bad name for fever, and not without cause ; but I have been told that on the estates now opening out, and referred to in this report, there has been very little fever. Should this prove to be the case, I imagine coolies in time will proceed as willingly to work in the Annamullays as they now do in Wynaad.

22. In conclusion, I may add that I was on these mountains for two months with eight Native followers who were all perfectly healthy, with the exception of two slight cases of fever, brought on by a day's exposure to

cold and wet, (the Natives at Ootacamund frequently contract fever from similar causes), and taking into consideration the indifferent shelter afforded, their constant exposure to all the vicissitudes of climate during a period when elsewhere fever generally prevails, it may be accepted as a very fair criterion that the position of Michael's valley and the surrounding plateau is most favorable to health, and the high ranges once attained, there need be no apprehension of fever under ordinary circumstances. The Natives of these mountains do not exhibit the same symptoms of an unhealthy region, as is observed in the inhabitants of the lower Pulnis ; and I think I may safely assert, that these hills will eventually prove fully as free from fever as the Neilgherries, and possessing a climate equal to any of the ranges at present known.

23. For the reasons stated in this report, my stay on the high ranges was limited to the period now mentioned ; it must, therefore, be left for future explorers to determine, after a longer and more continuous residence on their summits, whether my surmises as to climate and salubrity are correct ; as I fear that circumstances will not admit of my testing the truth or otherwise of my own observations.

18*th December* 1865. (Signed) D. HAMILTON, Lieut.-Col.

Register of the Thermometer taken in Michael's Valley.—Annamullays.

		Outside the Hut.												Inside the Hut.												Remarks.
		Forenoon.				Noon.		Afternoon.						Forenoon.				Noon		Afternoon.						
	Date.	Time.	Degrees.	Time.	Degrees.	Time.	Degrees.	Time.	Degrees.	Time.	Degrees.	Time.	Degrees.	Time.	Degrees.	Time.	Degrees.	Time.	Degrees.	Time.	Degrees.	Time.	Degrees.	Time.	Degrees	
1864.																										
March.	27th	6·15	34	9	71	12	76	2	75	...	...	9·30	52	6·15	44½	9	62	12	72	2	73	...	...	9·30	55	Sharp white frost at day light. Fine day.
,,	28th	5·30	36	9	72	...	...	...	..	...	...	9	52	5·30	46	9	67	...	...	...	...	...	...	9	56½	Fine day. No frost this morning.
,,	29th	5	40	9	72	12	78	2	77	7	58	...	...	5	49½	9	66	12	73	2	75	7	64	...	...	White frost in the morning. Fine day.
,,	30th	6·30	42½	...	...	...	...	...	...	...	...	...	...	6	49½	...	...	...	...	...	...	...	...	...	...	A slight frost. Fine day.
,,	31st	6	43½	...	...	12	79	2	75	...	...	...	...	6	51	...	...	12	76	2	75	...	...	...	...	Cloudy, with thunder. Slight rain in the evening.
April.	1st	6	46½	..	...	12	83	2	76	7	58	9·30	56	6	55	...	...	12	73½	2	72	7	62	9·30	61	Forenoon fine. Afternoon cloudy.
,,	2nd	6	52	9	70	12	72	...	...	...	...	9	54	6	61	9	67	12	74	...	...	...	...	9	64	Fine day.
,,	3rd	6	45	9	70	12	5	...	...	6	62½	9	51½	6	52½	9	67	12	72	...	..	6	64	9	63	Fine morning. Heavy clouds during the day. Evening fine.
,,	4th	6	40½	9	67	12	74	2	76	7	55	...	...	6	51	9	65	12	70½	2	72	7	60½	...	...	Fine day.
,,	5th	6	49	9	72	12	69½	2	69	6	61	...	...	6	52	9	66	12	69	2	60	6	65	...	...	Morning cloudy but fine Fine day.
,,	6th	6	45	9	71	12	68	...	...	6·30	60	9·30	52	6	52	9	66	12	67½	...	...	6·30	65	9·30	61	Morning windy but fine. Noon light rain. Afternoon cloudy and thunder.
,,	7th	6·30	55	9	71	12	83	2	71	6·30	53	9·30	51	6·30	59	9	66½	12	72½	2	72	6·30	62	9·30	60	Morning dense fog. Day fine.
,,	8th	6	48	9	68	12	75	...	...	...	...	9	52	6	54	9	67	12	74	...	...	...	...	9	61	Fine day.
,,	9th	6	48	9	74	12	79	2	80	...	...	9	54	6	54½	9	68½	12	73½	2	74	.	...	9	64	Do.
,,	10th	6·30	56	9	73	12·30	79	...	...	6·30	64	9	56	6	59½	9	69	12	73	...	...	6·30	67	9	64	Do. Afternoon cloudy.
,,	11th	6	48	9	73	12	84	...	...	6·30	61	9·30	55	6	54	9	68	12	76½	...	...	6·30	66½	9·30	64½	Morning fine. Afternoon cloudy and thunder.
,,	12th	6	45	9	73	12	76	2	85	6·30	62	...	...	6	54	9	69	12	74	2	75½	6·30	67½	...	...	Windy morning. Noon fine. Afternoon cloudy with thunder.
,,	13th	6	55	9	75	12	81	2	75	7·30	59	...	...	6	61½	9	70	12	74	2	74½	7·30	65½	...	...	Fine day. Thunder at times.
,,	14th	6	48	9	73	12	83	2	76	...	...	9·30	56	6	54	9	68½	12	76½	2	75	...	...	9·30	66	Do. Afternoon cloudy.
,,	15th	6	48	9	75	...	...	...	..	6·30	60	...	...	6	56½	9	70½	...	...	...	...	6·30	66½	...	...	Fine. Cloudy at times.

April	16th	6	49½	9	73	12	76	2	74	...	...	9 30	56	6	56	9	69	12	70	2	73	...	..	9·30	63	Morning and forenoon fine. Afternoon cloudy. Evening fine.
,,	17th	6	47	9	74	...	...	2	77	6·30	57	9 30	55	6	59½	9	67	...	...	2	70	6 30	64½	9 30	61	Morning and forenoon cloudy. Evening fine
,,	18th	6	53½	9	70	12	80	...	...	6·30	58	9	54	6	56	9	67½	12	71½	...	...	6 30	65½	9	63	Fine day,
,,	19th	6	46½	9	71	12	81	...	...	6·30	61	9	58	6	56	9	67	12	73½	...	...	6 30	67	9	64½	Do.
,,	20th	6·30	59½	9	65	12	79	2	76	6·30	64	9·30	58	6·30	62	9	64	12	71	2	72	6·30	68	9·80	63½	Cloudy day. Heavy shower in the evening.
,,	21st	6	55½	9	69½	12	72	...	...	...	...	...	...	6	61	9	67½	12	70	...	...	...	...	...	...	Morning fine. Afternoon cloudy with fresh breeze
,,	22nd	...	...	...	...	12	76	2	68	9·30	60	9·30	55	6	61½	...	...	12	71½	2	69½	6·30	64½	9·30	62⅓	Morning fine. Rain in the afternoon and evening.
,,	23rd	...	...	9	70	12	60	2	67	6·30	52	9·30	54	6	58	9	67	12	63½	2	68	6·30	59	9 30	61	Cloudy. Rain in the afternoon.
,,	24th	...	...	9	64	12	67	2	62	6·30	56	9 30	58	6	53	9	64½	12	69	2	65	6 30	61	9 30	60	Slight rain in the morning. Forenoon cloudy. Rainy afternoon
,,	25th	...	...	9	70	12	71	2	61	6·30	58	9·30	53	6	59	9	66	12	67½	2	63	6·30	61	9·30	59	Forenoon fine. Wet afternoon.
,,	26th	...	...	9	66	12	75	2	78	6·30	60	9·30	57	6	58	9	68	12	73	2	73	6·30	62	9·30	62½	Do. Cloudy afternoon.
,,	27th	...	...	9	73	12	76	2	75	6·30	63	9·30	57	6	60	9	70½	12	73	2	71½	6·30	54½	9·30	63	Cloudy day. Heavy rain after night-fall.
,,	28th	...	...	9	76	12	73	2	83	6·30	62	...	...	6	58	9	71	12	68½	2	72	6·30	66½	...	...	Do.
,,	29th	...	...	9	69	12	74	2	75	6·30	63	9·30	58	6	60	9	66½	12	71½	2	72	6 30	65	9 30	66½	Morning misty. Cloudy day.
,,	30th	6	58	9	73	12	75	2	74	6·30	62	9 30	54	6	61½	9	65½	12	71	2	72	6·30	66	9·30	65	Cloudy day, with thunder.
May.	1st	6	50	9	71	12	76	2	75	6 30	62	10	55	6	57	9	68	12	72½	2	73½	6·30	68	10	66½	Forenoon fine. Afternoon heavy clouds, with thunder.
,,	2nd	6	50	9	72	12	78	2	80	9·30	62	9·30	58	6	59½	9	68½	12	74	2	74½	6·30	66	9 30	61½	Fine day.
,,	3rd	6	45	9	72	12	70	2	70	9 30	62	11	59	6	62	9	69½	12	65	2	66	6 30	63	11	63	Do.
,,	4th	6	55	9	68	12	75	2	81	9 30	61	9 30	54	6	61	9	65½	12	71	2	72	6·30	65½	9·30	61½	Forenoon fine. Noon and afternoon heavy clouds with thunder.
,,	5th	...	...	9	73	12	75	2	70	9·30	66	9·30	58	6	62	9	68½	12	71	2	66	6·30	67	9·30	64½	Fine day. Slight rain at night.
,,	6th	...	...	9	73	12	71	2	74	9·30	65	9·30	56	6	60	9	68½	12	62½	2	69½	6·30	64	9·30	63	Cloudy morning. Fine but cloudy during the day.

Register of the Thermometer in Michael's Valley.—(Continued.)

		Outside the Hut.												Outside the Hut.												Remarks.
		Forenoon.				Noon.		Afternoon.						Forenoon.				Noon.		Afternoon.						
May	7th	...	...	9	68	12	78	2	71	6·30	61	9·30	54	6	62	9	66½	12	72½	2	74½	6·30	64	9·30	60	Cloudy forenoon. Very heavy rain afternoon. Wet night.
,,	8th	...	...	9	69	12	68	2	65	6·30	55	9·30	53	6	62	9	65½	12	69½	2	66½	6·30	59	9·30	61	Cloudy forenoon. Heavy rain in the afternoon.
,,	9th	...	..	9	62	12	65	2	68	6·30	62	9·30	58	6	63	9	63½	12	66	2	65	6·30	64	9·30	62	Cold cloudy day.
,,	10th	..	...	9	70	12	68	2	60	6·30	62	9·30	57	6	57	9	69	12	68	2	66½	6·30	65	9·30	64½	Morning cloudy. Wet afternoon, cloudy evening.
,,	11th	..	...	9	66	12	73	2	65	6·30	60	9·30	58	6	57	9	68	12	62½	2	69½	6·30	63½	9·30	64	Cloudy day, with thunder in the afternoon.
,,	12th	6	53	9	68	12	75	2	77	6·30	58	9·30	56	6	60	9	67	12	72	2	72	6·30	64½	9·30	63	Cloudy day. Night clear.
,,	13th	6	53½	9	69	12	75	2	76	6·30	63	9·30	56	6	61	9	71	12	71	2	72	6·30	67½	9·30	62	Fine day.
,,	14th	6	52	9	70	12	73	2	72	6·30	63	9·30	59	6	59½	9	68	12	69	2	68	6·30	67	9·30	61	Fine morning. Shower at noon. Slight rain in the afternoon Evening fine.
,,	15th	6	53	9	68	12	66	2	65	6·30	59	10·0	57	6	60	9	67	12	67½	2	68	6·30	64½	10·0	63½	Morning fine. Wet afternoon and night
,,	16th	6	51	9	68	12	68	2	73	6·30	60	9·30	58	6	62	9	67	12	70	2	69½	6·30	[illegible]	9·30	62	Cloudy day. Light rain in the evening.
,,	17th	6	54½	9	67	12	78	2	68	6·30	61	10·0	57	6	61	9	65½	12	73	2	71	6·30	64	10·0	63	Morning fine. Rain in the afternoon. Evening cloudy.
,,	18th	6	55	9	70	12	75	2	67	6·30	59	9·30	58	6	62	9	67	12	71½	2	71½	6·30	62	9·30	61½	Cloudy day.
,,	19th	6	55½	...	...	...	...	...	...	...	...	...	..	6	63	...	...	...	...	...	...	...	...	...	...	

Register of Thermometer placed on the ground taken each morning at Sunrise.

Month.	Date.	Degrees.	Month.	Date.	Degrees.	Month.	Date.	Degrees.
March	27th	32	April	1st	...	May	1st	46
,,	28th	33	,,	2nd	42	,,	2nd	46
,,	29th	...	,,	3rd	42	,,	3rd	45
,,	30th	32	,,	4th	36½	,,	4th	44
,,	31st	39	,,	5th	39	,,	5th	46
			,,	6th	43	,,	6th	43
			,,	7th	53	,,	7th	44
			,,	8th	43	,,	8th	45
			,,	9th	45	,,	9th	42
			,,	10th	52	,,	10th	44
			,,	11th	43	,,	11th	40
			,,	12th	42	,,	12th	46
			,,	13th	50	,,	13th	46
			,,	14th	43	,,	14th	44
			,,	15th	44	,,	15th	42
			,,	16th	46	,	16th	42½
			,,	17th	55	,,	17th	45
			,,	18th	50	,,	18th	43
			,,	19th	43	,,	19th	44
			,,	20th	56			
			,,	21st	53			
			,,	22d	51			
			,,	23rd	42			
			,,	24th	42			
			,,	25th	51			
			,,	26th	44			
			,,	27th	46			
			,,	28th	51			
			,,	29th	51			
			,,	30th	53			

The Thermometer was placed on the ground outside the Hut facing East.